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Platon N. Mandros			LAROSE, COLIN M	
BURNS, DOANE, SWECKER & MATHIS, L.L.P.				
P.O. Box 1404			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/942,173	YAMAZAKI, TSUTOMU	
	Examiner	Art Unit	
	COLIN M. LAROSE	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 February 2008.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-40 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-6,9-19,22-32 and 35-40 is/are rejected.
- 7) Claim(s) 7,8,20,21,33 and 34 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____ .	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Amendments and Remarks

1. Applicant's amendments and remarks dated 14 February 2008, have been entered and made of record.

Response to Arguments and Amendments

2. Applicant's arguments have been considered but are not persuasive for the following reasons:

Applicant asserts that Bates does not teach or suggest the claimed limitations because "if the first image data in *Bates* has only one color, then Bates does not teach 'means for grouping all the colors in the first image data into groups of approximately equal colors'. It would not make sense for *Bates* to teach such a grouping means because there would be nothing to group if each text object was only one color." (Remarks, p. 3) In other words, Applicant appears to assert that if all of Bates' foreground text is the same color, then Bates would not group all the colors of the text into groups of equal colors, as claimed.

It is not clear how imposing the requirement that all of Bates' foreground text be the same color would alter Bates' disclosure. In any event, Bates does teach that foreground text can have different colors, and that neighboring text having like color is grouped into text objects for processing purposes in accordance with the claimed invention:

The "first image data" corresponds to Bates' foreground text. The colors of the foreground text are not limited—i.e., any of Bates' foreground text can be any color. However, some of the colored text may be unreadable against certain background colors. In order to adjust

the color contrast between the foreground text and background images, Bates compares groups of text ("text objects") having the same color to corresponding background regions.

For instance, figure 2 shows a background region 240 superposed with three text objects, 241 ("UNUSUAL"), 250 ("CLICK HERE"), and 245 (all other surrounding text). Each of these three text objects is a different color (column 12/30-32). Accordingly, each text object (241, 250, 245) represents a grouping of image data (i.e., pixels) having approximately equal colors. The text objects are "groups of approximately equal colors"—i.e., each group is composed of a single color—such as "UNUSUAL" (241) is red, "CLICK HERE" (250) is blue, and all other surrounding text (245) is black.

Therefore, Bates is considered to disclose "grouping all the colors in the first image data into groups of approximately equal colors," as claimed. In Bates, there may be more than one text object per color (For instance, there may be black text in one part of the image that is grouped into a text object, while in another region of the image there exists another group of black text that forms a different text object.) However, the claims do not appear to preclude this arrangement and require only that all the colors of the foreground data be formed into monochrome groups.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 9, 11, 14-16, 22-29, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,809,741 by Bates et al. ("Bates").

Regarding claims 1, 14, 24, and 27, Bates discloses an image processing device/method/program comprising:

a first color detection means for detecting colors of a first image data ("foreground text") by each processing unit (computer 100 detects the colors of the pixels ("processing units") for each foreground text object – see step 320, figure 3);

a second color detection means for detecting colors of a second image data ("background object") that serves as the first image data's background by each processing unit, the second image data having a plurality of different colors (computer 100 detects the colors of the pixels for the background object—see step 307, figure 3; see also figure 5); and

means (computer 100) for:

grouping all the colors in the first image data into groups ("foreground text objects") of approximately equal colors (i.e., each foreground text object is a group of pixels having substantially the same color—accordingly, the foreground text objects represent grouping of text according to color) and comparing each of the first image data groups of colors to all the colors of the second image data (column 4/21-33; column 5/44-49; also figure 3, step 325: the color of each of the foreground text objects and the color(s) of the corresponding background objects are compared by accessing pre-stored user preferences, such as shown in figure 7), and

specifying a uniform adjusting color that makes the first image data recognizable against all colors of the second image data that serve as the first image data's background (i.e., when the color of a foreground text object and the color(s) of the corresponding background object exhibit a contrast problem (step 330), new colors for the text and/or background ("uniform adjusting color(s)") are generated at step 335 – see also figure 7; see also column 21, lines 36-62 where "all" the colors of the second image data are utilized regardless of the number thereof).

Regarding claims 2, 15, 25, and 28, Bates discloses an image processing device/method/program as claimed in claims 1, 14, and 24, further comprising: an image synthesizing means for synthesizing the first image data converted into said adjusting color with said second image data (i.e. computer 100 synthesizes the text image data that has been converted to a new color with the background image data).

Regarding claims 3, 16, 26, and 29, Bates discloses an image processing device/method/program as claimed in claims 1, 14, and 24, wherein said processing unit is a pixel (i.e. the image data may be in a GIF or JPEG format and therefore, consists of pixels – see e.g. column 12, lines 2-6).

Regarding claims 9, 22, and 35, Bates discloses an image processing device/program as claimed in claims 1 and 14, wherein said first image data is an image data that represents character images (i.e. first image data is foreground text).

Regarding claims 11 and 23, Bates discloses preparing an electronic file based on the image data synthesized by the image synthesizing means (e.g. a new HTML file is created with the new color combinations – see column 16, lines 18-22).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 6, 10, 17, 19, 30, 32, and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,809,741 by Bates et al. (“Bates”) in view of Translation of Japanese Patent 09-025285A by Honda (“Honda”).

Regarding claims 4, 17, and 30, Bates discloses an image processing device/program as claimed in claims 1 and 14, further comprising:

a first memory means (120) for storing the colors of the first image data by each of the approximately equal colors (i.e. the values of the detected colors are necessarily stored somewhere in memory); and

a second memory means (120) for storing the colors of the second image data that serves as the first image data's background, said colors of which are correlated to each of the corresponding colors of the first image data that are stored in said first memory means (i.e. the values of the detected colors are necessarily stored somewhere in memory, and those colors of the background object are correlated, or correspond, to the text colors that are overlaid thereon);

Bates teaches that one way of determining the background or foreground colors is through an histogram accumulation method, such as shown in figure 5. However, Bates is silent to calculating average values of the background image data (i.e. the second image data), and

using the average background color and the text color to determine the uniform adjusting color, as claimed.

Honda discloses an image processing system that makes text more legible by altering the colors of the text so that it exhibits higher contrast as compared with the background on which the text is overlaid. In particular, Honda discloses basing the determination of the new text color on the average of the background colors (page 5 of Honda: “overlay pixel value determination circuit … computes the average pixel value (density value) of a certain region [of the background image]”). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Bates by Honda to calculate the average value of the background colors per Honda’s teachings and determine the uniform adjusting color based on the colors of the first image data (i.e. the text object) and the average of the second image data (i.e. background colors), since Bates teaches that the manner of detecting the colors of objects is well-known in the art (column 12, lines 10-13), and Honda discloses that one technique for determining a background color is to compute the average of color values in the background. Bates’ uniform adjusting color would then be based on the detected text object colors and the average color values of the background.

Regarding claims 10 and 36, Bates discloses an image processing device as claimed in claim 1, further comprising: a third memory means for storing said second image data (i.e. memory 120).

Regarding claims 6, 19, and 32, Honda discloses an image processing device/program as claimed in claims 4 and 17, wherein said average color value calculating means calculates the average value of the coordinate values of the colors of the second image data in a specified

color system (page 5 of Honda: "overlay pixel value determination circuit ... computes the average pixel value (density value) of a certain region [of the background image]" – this computation is done in the RGB color system).

Regarding claims 37-40, Bates appears to be silent to comparing the first image data groups ("text objects") to a value representing a combination of all of the colors of the second image data ("background objects"), as claimed.

Honda discloses an image processing system that makes text more legible by altering the colors of the text so that it exhibits higher contrast as compared with the background on which the text is overlaid. In particular, Honda discloses basing the determination of the new text color on the average of the background colors (page 5 of Honda: "overlay pixel value determination circuit ... computes the average pixel value (density value) of a certain region [of the background image]"). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Bates by Honda to calculate a value representing a combination of all of the colors of the second image data (i.e., the average value of the background colors) per Honda's teachings and determine the uniform adjusting color based on the colors of the first image data (i.e. the text object) and the average of the second image data (i.e. background colors), since Bates teaches that the manner of detecting the colors of objects is well-known in the art (column 12, lines 10-13), and Honda discloses that one technique for determining a background color is to compute the average of color values in the background. Bates' uniform adjusting color would then be based on the detected text object colors and the average color values of the background.

7. Claims 5, 18, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,809,741 by Bates et al. (“Bates”) in view of Translation of Japanese Patent 09-025285A by Honda (“Honda”), and further in view of U.S. Patent 5,930,385 by Fujimoto et al. (“Fujimoto”).

Regarding claims 5, 18, and 31, Bates and Honda is silent to a judging means for judging that colors of the first image data are approximately equal when a sum of squares of the differences of their coordinate values in a specified color system is less than a specified value. Bates, for instance, equates two colors when the colors are within a certain range (see delta values, figure 7)

Fujimoto discloses an image processing system adapted to perform a color conversion on an input image, such as converting a color image to a monochrome image. Figure 2 shows a method for such conversion. Figure 3 shows the process of region dividing, which is included in the method of figure 2. In dividing the image into color regions, it is determined whether adjacent pixels have the same color at step 2-3. As figure 8 shows, determining whether two colors are the same involves determining whether the sum of squares of a difference in color values is less than a threshold.

It would have been obvious to modify Bates and Honda by Fujimoto to include means to judge the similarity of input character colors, as claimed, since Fujimoto discloses that generating monochrome text involves judging the similarity of colors based on the sum of squares of the differences of coordinate values in relation to a threshold.

8. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,809,741 by Bates et al. (“Bates”) in view of U.S. Patent 5,872,573 by Adegeest.

Regarding claim 12, Bates does not expressly disclose obtaining the first and second image data via a scanner, as claimed.

Adegeest discloses a system for producing legible text to be overlaid on a background, similar to that of Bates. In particular, Adegeest discloses that it is conventional to obtain input images via a scanner for the purposes of adjusting text and background so that the text is more legible against the background. It would have been obvious to modify Honda by Adegeest to input the second image via a scanner, as claimed, since Adegeest shows that it was conventional to input images by electronically scanning documents with a scanner.

Regarding claim 13, Bates is silent to a printer unit for printing images on recording media based on the synthesized image data.

Adegeest discloses a system for producing legible text to be overlaid on a background, similar to that of Bates. In particular, Adegeest discloses that it is conventional to output processed images via a printer 23, figure 1. It would have been obvious to modify Honda by Adegeest to output the synthesized image via a scanner, as claimed, since Adegeest shows that it was conventional to output images using a printer.

Allowable Subject Matter

9. Claims 7, 8, 20, 21, 33, and 34 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner, can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. Any inquiry of a general nature or relating to the status of this application or proceeding can also be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

/Colin M. LaRose/
Colin M. LaRose
Group Art Unit 2624
17 March 2008